Vol. IV. No. 16. August 1, 1907.

THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

A REVIEW OF PRAGMATISM AS A PHILOSOPHICAL GENERALIZATION

IN a former paper[1] I have stated and examined three propositions which seem to me to contain what is essential to the pragmatist's theory of knowledge. These propositions all apply to a certain identifiable experience in which thought arrives at what is taken to be truth. This experience is preceded by a practical immediacy which presents no problems. Then, when an occasion arises which can not promptly be sized up and acted on, there is precipitated from this immediacy a complex situation in which it is possible to distinguish (1) accepted reality, or object, (2) problematic reality, (3) ideas, or tentative solutions of the problem, and (4) the interested thinker, or subject. When the problem is solved, practical immediacy is resumed, now enriched through the assimilation of a new belief. In thus directing our attention to that locus in experience in which, if anywhere, true knowledge is to be found, the pragmatist has done much to clarify the issue. Furthermore, since true knowledge *is* to be found only in that locus it must be possible to find there all the elements which are essential to an adequate description of it. I therefore agree with the pragmatist (I.) that truth is always related to a particular interested intention, and (II.) that the proof of truth must be contained within the same particular experience which manifests the intention. But the pragmatist maintains further (III.) that the proof, mark, or guarantee of truth is the *satisfying* character of that moment of the process in which the cognitive interest is fulfilled. It is this generalization which distinguishes pragmatism as a radical theory of knowledge; and it appears to me to be incorrect. Although the moment of truth undoubtedly has its place in the practical context, and is qualified by those feelings which are proper to the successful issue of any enterprise, nevertheless it can not properly be said to *consist* in these feelings. Taking the experience as the pragmatist himself finds it, we are impelled to inquire for that element in

[1] 'A Review of Pragmatism as a Theory of Knowledge,' this JOURNAL, Vol. IV., p. 365.

the situation which gives rise to the feeling of satisfaction, and the absence of which would require us to prolong the inquiry, or to revise a satisfaction prematurely felt. Now according to the pragmatist's own analysis, the satisfaction is legitimate and sound *when a judgment has been found which is consistent with that which is accepted as real.* The virtue of truth, then, is the presence of a discovered reality possessing distinction and compatible relations. The experience of truth is the affirmation of experienced reality together with the reaffirmation of residual reality. So far as truth is concerned, the important element of the situation is identity or consistency with reality. On the other hand, so far as the human life is concerned, the important element in the situation is the relation of discovery to antecedent needs and to subsequent uses. Thus, it would appear that in so far as pragmatism purports to be a definition of the meaning of truth, it is untenable; while in so far as it exploits the human connections and bearing of truth, it can not be denied.

In the present paper I shall present certain further propositions which I have gathered from the contemporary literature of pragmatism, and which are in the main philosophical rather than epistemological.

I. *All Truth Has Practical Corollaries.*—It is important to distinguish this proposition from that in which it is maintained that all truth is the function of some interested intention. The only interest which can be proved to be common to all cases of cognition is the theoretical interest itself. Doubtless one can not be said to know, whether truly or falsely, unless one wants and intends to know something; but the pragmatist is disposed to extend this generalization somewhat loosely, and to confuse the constant and universal relation of truth to a cognitive intention with the general service which truth may render to various collateral interests. These two considerations are very different. The cognitive interest itself is indispensable to truth, but the relation of collateral interests to truth is, so far as I can see, entirely accidental. That there is always some such relation no one will be disposed to deny. The cognitive interest is one of the functions of a complex organism, and has developed because of its organic usefulness. Whatever is known is available for any uses of which the organism is capable; it can be felt, acted on, talked about, written down, thought about or dealt with in any of the other ways characteristic of human life. Mr. Schiller goes to unnecessary lengths to show that there are no useless truths. His conclusion could be drawn at once from the unity of the psychophysical organism; the sensory, associative, affective and motor elements in human nature all contribute to a more or less com-

mon fund of resources. And one may easily go farther and show that the solidarity of society and the ready means of communication and intercourse make these resources available for humanity at large. But this is very far from a proof that truth *consists* in such uses. They are involved because of the organic and social connections of the truth-seeking function; but truth would not cease to be truth if some organic or social abnormality were to make it impossible to use it. Truth which is used, is indeed likely to be widely distributed and long remembered; truth which is not used will be neglected and forgotten; but even these circumstances do not affect its status as truth. I may illustrate my point by showing the ease with which, following the pragmatist's methods, it may be proved that truth consists in its being put to some particular use. Thus all truth is useful to philosophers. There is nothing true which they can not talk and write about; we may search human knowledge in vain for something which is not more or less revelant to their interests. And yet I suppose no one would argue that truth consists in being talked and written about by philosophers. If the philosophic function of humanity should become atrophied much truth would doubtless fall into disuse and be forgotten, but it would not have been disproved. Similarly, we may conceive every human or social interest to disappear, and the knowledge which these interests employ would not be affected in the slightest degree as respects truth. Knowledge may in this way cease to exist, but it does not change from truth into falsity. Inasmuch as the proof of truth need not wait for any uses beyond the cognitive intention itself, the issue is already concluded when these uses are contrived. Or if no such uses should ever be contrived, the conclusion of the issue would not on that account be invalidated; for knowledge in disuse and untruth are two clearly distinguishable things.

There is a closely related proposition which has tended to obscure the point which I have just raised. All truth tends to be useful truth because the cognitive interest in its genesis is an offshoot of the self-preservative interest. A certain vital service must always be required of it. But those truths which are most vital, that is, most intimately connected with the organism's general interest in existence, are not so much useful truth as they are *truths of use*. The most immediately important truths, the cash truths, so to speak, are answers to a question of this form: *What will happen to me if I do a to b?* Some truths are practical in their content. If I find that *c* will happen to me if I do *a* to *b*, I am experiencing the nature of a temporal circuit including terms belonging both to the environment and to my own body. Experiment is here not the external test of a theory, but the living through, the direct serial experience

of, a set of connected events. Truths of natural science are largely of this order; and it is natural to regard these as generally typical because of their bulk and urgency. But it will be observed that truth is here made not by any practical inferences that are drawn from the truth itself, but by the direct experience of a part reality which embraces practical inferences.

Thus while we agree that all truths have many practical corollaries and relate themselves potentially to all human concerns, we must insist that such inferences do not either make or unmake truth. And, secondly, while we agree that there is a great body of truth which is essentially practical or experimental in its form, we must insist that in this case the usefulness lies in the character of the reality which is selectively known, and does not constitute an external and delayed test of truth.

II. *The Difference between One Concept and Another Consists in the Difference it Makes.*—This proposition is supposed to contain an important methodological application of the general pragmatic theory. In our definition and comparison of concepts we are to look to their practical implications. Where there are no practical implications a concept is meaningless; where these are equivocal the concept is obscure; where two concepts are indistinguishable as respects their practical implications, they are not two but one. This is doubtless wholesome advice, but it seems to me that it could be stated in much clearer terms. Philosophy has unquestionably suffered from the use of vague conceptions. As a science it is almost entirely lacking in unequivocal symbols. Philosophers borrow the language of common sense with all of its indeterminateness and latitude of meaning, and make matters worse by extending its application. Of two parties to a philosophical discussion it is unusual for either to know just what the other is talking about, if, indeed, he knows exactly what he is himself talking about. But it is difficult to see how we would gain in clearness by restricting ourselves to the *practical* terms of common sense. In the familiar phrase 'sufficient for practical purposes' we find that even common sense recognizes that such propositions as are clear enough to act on are very far from being unambiguous. So far as I can see, this pragmatist contention reduces to two propositions. In the first place, an idea must have identifiable and distinguishable content. Ideas are not different because they are given different names, but only because they contain different elements of experience. This involves no more than the old logical formulas concerning the identity of indiscernibles and the importance of clear and distinct ideas. But doubtless it is worth while to reiterate the importance of keeping close to experience, of always knowing what, and precisely what, one is talking

about. In the second place, all known differences are practically significant. This is the proposition which we have just considered above. It is quite true that if we really know what we are talking about, if we really know 'the difference,' we must have added something to our stock of practical resources. There can not be any known difference which *makes* no difference, either actually or potentially. This fact may serve as a rough-and-ready test of conceptual distinctions, but it will still be true that to discover the content of the conception or the precise nature of the difference, we must resort not to the practical applications, but to the region of experience of which the concept purports to be a description.

Here again it is important to consider the bearing of natural science upon the theory of knowledge. If it be true, as I have maintained above, that most of the truths of natural science are experimental truths, then it will follow that real differences in natural science are experimental differences. In so far as natural science attempts to define and systematize processes of nature which are at once objects of action and sources of consequences for the organism, it is true that scientific concepts really differ only in so far as they distinguish possible practical situations. Professor James quotes the following from Mr. W. S. Franklin: "I think that the sickliest notion of physics, even if the student gets it, is that it is the science of masses, molecules and the ether. And I think that the healthiest notion, even if the student does not wholly get it, is that physics is the science of the ways of taking hold of bodies and pushing them."[2] Now while I heartily subscribe to this opinion, it would seem to be on other grounds than those which recommend themselves to the pragmatist. The results of science are misunderstood mainly because their original reference is lost sight of. Masses, molecules and the ether, as empirically derived and experimentally verified, are *modes of behavior*. They describe what happens in nature, especially in its spatial and temporal confrontations with the organism. Error will almost inevitably arise if the concept is taken out of its context in experience. But this scarcely confirms the thesis of pragmatism. It proves only that descriptions of the process of spatial and temporal redistribution are *what they are found to be*, and not something else. It proves nothing, for example, concerning the truth of arithmetic or algebra, which do not describe spatial and temporal redistributions. To lose sight of the abstract elements in experience to which mathematical systems refer, and to identify them with the practical coordination into which they enter, is to be guilty of the same fundamental confusion to which the pragmatist objects in the case of the conceptions of physics.

[2] 'A Defense of Pragmatism,' *Popular Science Monthly*, April, 1907, p. 353.

III. *The Adequacy of Truth Depends on the Degree to which it Satisfies the Individual or Society as a Whole.*—If this proposition were true, it would have very important philosophical consequences; and I am inclined to think that the ethical and religious importance which pragmatism possesses for some of its advocates depends upon its acceptance. And yet it would appear not only to be without foundation in fact, but even to contradict the earlier claims of pragmatism itself. In the pragmatist's account of the way in which truth gets itself established, it is admitted that what is already accepted as real plays the controlling part. Our hypotheses are selected or rejected by nature, given in the form of funded belief. Judgments are workable or verifiable in so far as they are consistent with what is taken to be real; and however far back we go this will always have been the case. What we now accept as true has at some earlier time proved to be compatible with what was then taken to be true. The present proposition implies that nature proposes and man disposes, but according to the above analysis man proposes while sensation, relation and funded truth dispose. Leaving aside the specific admissions of pragmatism, the present proposition is not a faithful account of human experience. Consider, for example, belief in a life after death. The human tendency is not in the direction of the formation of more congenial beliefs, the construction of a universe that shall best answer given human needs and hopes, but in the direction of an adjustment of these needs and hopes to things as they are found to be. Enlightenment is far more likely to bring disillusionment than the confirmation of hopes, and this is true not only of the individual, but of the race. Undoubtedly we try to find evidence which shall suit us, but such suiting does not constitute or even strengthen the evidence. Equilibrium between life and its environment is reached in the end not by getting a truth to suit our uses, but by getting used to reality.

IV. *Knowledge Modifies and Adds to Being.*—Pragmatism makes much capital of this proposition. Without careful interpretation, however, it is so equivocal as to be almost meaningless. It is undoubtedly true that knowledge adds what knowledge is. For every act of knowing, the world is richer by that knowing. Thus the world of knowledge, in its range and systematic unity, is being extended and constructed as the days pass. But this must not be taken to mean that the objects known are either constituted or essentially modified by this fact. I can not be said to know what a past event *was* unless my knowledge obtains access to it *as it was.* In an earlier paper I have attempted to show how we may be said to know the past in its own proper temporal locus.[3] If we can not thus know

[3] 'The Knowledge of Past Events,' this JOURNAL, Vol. III., p. 617.

the past, we can not know historical events at all; for to every event its own particular time is an inalienable part. But the problem concerning knowledge of the past is essentially the same as the general problem of knowing anything beyond the temporal instant of the psychological knowing state. For this and for other reasons it appears to me absurd to contend that knowledge makes the world. Knowledge does make *its* world, it may even be said to make *our* world; but there is a tremendous significance, practical, philosophical and religious, in this difference between our world and *the* world. If the difference be retained and construed strictly in terms of a realistic theory of knowledge, then humanism is not a metaphysics, but a philosophy of history; not a theory of being, but an interpretation of life.

In this study of pragmatism I have attempted interpretation rather than refutation. My objections to the opinions of the pragmatist relate less to their substance than to the importance which he attaches to them. But in Proposition III. in my 'Review of Pragmatism as a Theory of Knowledge' I have attempted to state a radical contention which may perhaps serve to bring the present controversy to a point. In so far as the pragmatist contends that the proof of truth *consists essentially* in the satisfaction of the cognitive interest, his position is unequivocal and, as it appears to me, untenable, for in this proposition the relation of knowledge to reality is explicitly subordinated to its relation to the knower himself. But since we can not leave reality wholly out of the question, knowledge is thus made a mode not of the reality known, but of the real knower. Pragmatism here seems to face a dilemma. If the knower has a permanent and definable nature, but exists only in moments of satisfaction, the outcome is skepticism. Knowledge is assimilated to the knower, and the knower is reduced to an irrecoverable moment of immediacy. But at this point absolute idealism comes to the rescue of pragmatism; for in absolute idealism the knower is provided with a structure which makes him capable of supporting knowledge together with the reality which it has previously absorbed. The dialectical situation, then, would seem to be this. In so far as pragmatism cleaves to empiricism, it must forsake its subjectivist or relativist theory of knowledge, for empirical subjectivism or relativism amounts to the same thing as skepticism. On the other hand, in so far as pragmatism cleaves to subjectivism or relativism, that is, insists that in knowledge the thing known is subordinated to the knower, it must abandon its empiricism for some form of transcendental idealism; since if the thing known is to be reduced to the knower, the knower himself must be erected into a permanent and self-subsistent entity capable of supporting the whole.

Unless I have greatly mistaken the temper of pragmatism, this doctrine is primarily empiricist and only secondarily relativist. I feel sure that this is the case with Professor James. How often does he praise pragmatism because to his mind it *reflects nature!* Thus he says: "You see how democratic she is. Her manners are as various and as flexible, her resources as rich and endless, and her conclusions as obedient and malleable as those of mother nature."[4] In other words, nature is various, temporal and individual; and the justification of pragmatism lies in its power to reveal nature in these her native and proper characters. But this implies that the best thought is the most transparent, the most hospitable, the most generous thought, in which nature flows through the very veins of mind.

RALPH BARTON PERRY.

HARVARD UNIVERSITY.

THE CONTINUITY OF CONSCIOUSNESS

THAT consciousness is empirically without gaps seems to have become a sort of psychological axiom. It is no purpose of this article to deny that consciousness is continuous on the side of 'reality.' I ask only whether in the region of 'appearance' we find such continuity, whether concrete spontaneous experience is characterized by it? And first there must be some agreement as to what we are talking about, even although there is to be no attempt at defining consciousness. It is enough if we say that consciousness, if there be any such thing, must be a particular sort of 'that' in the field of experience. I hardly see how we can otherwise mean by the word 'consciousness' anything identifiable. For although it may be quite true that trees and houses are consciousness, it is not empirically evident that they are.

As soon as the matter is stated in this way, the continuity in question, as something directly observable, seems rather more than doubtful. No doubt, perhaps, consciousness *must be* continuous; but that, as a primary fact, it *is* continuous is far from certain. For if the claim of continuity is to be maintained, continuity must appear as characteristic not merely of some experience, but of all experience, of vigorous action as well as of introspection, of the philosopher working in his garden and thinking chiefly of future onions and potatoes as well as of the same philosopher studying reflectively his 'stream of consciousness.'

If consciousness is to be pronounced empirically continuous it must be either that all the objects which crop up in the course of

[4] 'Humanism and Truth,' *Mind*, N. S., Vol. XIII., p. 364.

experience are evidently cases of consciousness, or that they come to us having a gapless fringe or penumbra of consciousness, or that the continuity is maintained by means of a combination of objects characterized as consciousness and of consciousness-penumbra. It is the first alternative, I think, which is meant by the advocates of continuity. That is the sense in which for a long time I regarded the continuity in question as psychologically evident. So far as this paper has any thesis at all, it is to suggest a way of accounting for this opinion.

Whatever else consciousness may mean or signify, used in the traditional sense it means something equivalent to 'state of mind,' and this, as the persistence of solipsism as one possible logical alternative reminds us, is something essentially private, presented immediately to only one observer. Any attitude toward the field of experience, or toward any of its objects, which would tend to characterize them as essentially private and restricted to the inspection of one observer ought to make them feel less like independent and public objects and more like the kind of thing we naturally call consciousness. But this, I think, is what introspection does. It narrows the field of attention, and objects within it take on a certain flavor of subjectivity from the mere fact of emphasizing so much the 'me' in the given situation. Experience is just enough distorted to require, for its description, terms that are not quite suitable for other times and conditions. In so far, then, as introspection is able to transform the 'thats' of normal experience into consciousness thats, it may be quite true that consciousness is empirically continuous while this sort of observation is maintained. But is it not a case of 'the psychologist's fallacy' to attribute to wholly spontaneous and unreflective experience the peculiar quality that experience takes on when, without particularly meaning to do so, we look at it in a way that characterizes it as our own and as 'states'?

But we can not continually 'hold up' life in the interest of philosophy, and the section of experience through which consciousness may, possibly, have been continuous, must be followed by sections full of practical interests and physical energy, in which consciousness very probably does not exist, consciousness, that is, as one type of 'that' along with other 'thats,' and therefore as something identifiable and distinguishable. Accordingly, if there is any truth in this way of describing the facts, consciousness is empirically not continuous, but occasional and intermittent.

I have preferred to use the word 'consciousness' in a loose and popular fashion, and there is another word, possibly not less dubious than 'consciousness,' which I have used with rather more confidence,

and that is the word 'experience.' It may be objected that I deny the continuity of consciousness, but that I insinuate the continuity of experience, and that it really makes no difference which word is used. There may be a substantial degree of justice in this criticism; and there may not be: it depends. But instead of speaking, in this instance, of the continuity of experience, I should prefer to call that continuity which has been ascribed to consciousness, continuity of empirical situation. But even this continuity is rather a *must be* than an *is*, in so far as our faith in it is based on the thought that an empirical gap must have enough content to be observable and thus fill up its own interval. This would be evident in the case of any one who, though despairing of discovering gaps with the naked eye, might yet be hopeful of finding them with a microscope. And on this point Professor McGilvary's capital figure of the fly and the ointment, in his recent article[1] on this subject, is worth recurring to. When the fly is taken out, and the ointment is left in its 'proper purity,' then we have continuity of consciousness, not interrupted by objects that are not themselves cases of consciousness. I may be reading too much into the metaphor, but it serves so excellently to signify continuous 'consciousness' that I shall take advantage of it. When we take out the fly and the ointment flows together, we have, of course, continuity of ointment, but if the metaphor is to represent experience the fly must be left in. Have we, in this case, continuity of ointment? No, certainly, but possibly yes also, if the fly is really ointment in spite of appearances. In one sense, though, there is continuity, since the ointment presumably flows all round the fly and is continuous in spite of it. I think, however, that the continuity Professor McGilvary argues for runs right through the fly. Of course, it will not do to take a figure of speech very literally, but this one seemed too excellently suited to illustrate the discussion to be ignored. Now there is no difficulty in identifying ointment, and the presumption ought to be that if we say things confidently about consciousness it is because we can point to it with the same certainty with which we would point to the ointment. If Hume were alive to-day he would have put his finger on it long ago, or shown that searching failed to discover it. But if the fly is really a case of specialized ointment and therefore does not interrupt the continuity, it seems quite evident that ointment, or consciousness, is the whole thing; that is, speaking empirically, not something that can be discriminated, but the entire empirical situation, in which case the word consciousness means only the thing in which gaps are unthinkable. And it needs no argument to prove that a thing essentially without gaps is essentially continuous.

[1] This JOURNAL, Vol. IV., p. 225.

It may be that, in this connection, the term 'transitive and substantive states' can be of some use in describing the facts as they can be observed. As a matter of course we call this topic of discussion the 'stream of consciousness,' and that vivid term has become so inevitable that it controls our conception of the thing with real authority. Transitive 'states' and substantive 'states'—that is what experience is said to be made up of, and I mean by experience here the empirical situation, whatever that may be. That is, the empirical situation consists of 'states' which must be owned by somebody. I do not complain of this usage while we speak as psychologists for psychological purposes, but it seems evident that we glide, almost unconsciously, into what intends to be a description of primary experience, while we retain a phraseology invented for a particular point of view in a particular science. To claim that the empirical situation under normal circumstances consists solely of 'states' is to be the victim of a special phraseology. The situation may contain states, however, and transitive states in the psychological meaning of the word, that is, transitive states of consciousness and not changing conditions of objects. May it not be that a state of consciousness is, or usually is, a transitive bit of experience? Not all transitive things are consciousness, but is not consciousness like something without an anchor, something fluid, with movement in it? I ask only concerning what the word seems instinctively to turn toward before we confine it in a definition. If subjective states are a transitive sort of thing, and introspection seasons its objects with a subjective flavor, it is clear why the term 'stream of consciousness' is so appropriate; but does it describe the straight experience which never heard of a psychological point of view? I can not think that it does.

Nevertheless, as ultimate reality, the fly may be ointment and consciousness may possess continuity in some sense which is not identical with continuity of empirical situation. I must say that after writing that phrase so many times I should be only too happy to substitute for it 'continuity of consciousness' if the substitution were sure not to lead to misunderstandings. Yet if there be some particular sort of 'that' to which the word 'consciousness' ought to refer, we surely ought not to apply it to everything else except in the way of metaphysical interpretation. But here two difficulties suggest themselves. Good thinking presumes a consistent use of words, and it does not seem consistent to equate, in the higher regions of metaphysics, words that notoriously will not be equated on the lower level of normal life. And if one is not deterred by this, at least one wishes to take one's stand in philosophy, squarely

upon experience, and the judgment in metaphysics that flies are ointment would seem remote enough from the judgment that flies are flies. But that, perhaps, is the same difficulty.

The above remarks are intended as hardly anything more than suggestion and inquiry. It is worth while, however, to insist upon the distinction between the *is* and the *must be,* even although the difference is one of degree only, and to invite the advocates of the continuity of consciousness to tell us under which of these headings such continuity occurs and whether the consciousness which is continuous has any subjective character or is simply a psychological word for 'empirical situation.' Are flies flies or are they ointment? That is the question.

WENDELL T. BUSH.

COLUMBIA UNIVERSITY.

DISCUSSION

PROFESSOR DEWEY'S VIEW OF AGREEMENT

THE article by Professor Dewey on the 'Control of Ideas by Facts'[1] presents such an opportunity for definite questions by reason of its analysis of a specific situation that I can not forbear stating, in an interrogatory form, the difficulties I experience. My agreement with his logical position is so fundamental that any outstanding divergence on minor points must be capable of amendment.

Foregoing preliminaries, I shall plunge into the heart of the matter. Suppose, to use his illustration of the man lost in the wood (p. 201), the man has been hunting and, having bagged enough game, decides to return home. Presently he discovers an unfamiliarity in the appearance of things. We have now desire on the man's part to get home and a recognition that he is lost. Temporarily his action is stopped. He must reflect; but this reflection is for the purpose of enabling him to fulfill his primary desire to get home. Under the new conditions, the old desire has given place to a more complex one involving, consciously, means and end. This signifies that the focus of attention has been shifting gradually. He must find the *way* home. This gives a very complex reflective situation. Observation follows. He sizes up the surroundings, attempting to take in all the relevant facts, such as the lay of the land, the presence of conspicuous objects, the direction of the sun, etc. If he recognizes a landmark, a more or less definitely organized idea of the environment arises. "It is not some little psychical entity or piece of con-

[1] This JOURNAL, Vol. IV., p. 197.

sciousness-stuff, but is the interpretation of the locally present environment in reference to its absent portions . . . " (p. 202). It may be that he isn't certain of the correctness of his idea. If he reaches by its means, however, a place he is sure of, he remarks, if he is reflective, "That idea of mine *was* true." I would lay considerable stress upon the past tense of the proposition.

First, I would raise the question of a possible ambiguity in the use of the term 'plan of action' as synonymous with idea. I admit frankly that the thinking has been purposive, but is the idea a purpose? "That is, acted upon sincerely, it has led to the desired conclusion; it has *through action* worked out the state of things which *it contemplated* or *intended*" (italics mine). Now I would submit that the *man* intended to go home, not the *idea*. Referring back to the analysis above,—in order to get home (primary desire) he discovered that he must find the way (secondary desire). The idea is connected with *that*, not *directly* with the getting home. "The agreement, correspondence, is between purpose, plan and its own execution, fulfillment." Here, again, purpose is made synonymous with plan, and plan, apparently, with idea. It strikes me there are two purposes in the case, one subordinate to the other: (1) to get home, and this is not the idea; (2) to get a true idea of the way, and this again is not the idea.

'As to the agreement of the idea and the environment' (p. 202), Professor Dewey shuts out, first, presented reality, 'for that reality is the reality of himself lost.' I should say, because, by the terms of the problem, presented reality is not the reality wanted. "Not with the complete reality, for that at this stage of proceedings is the idea itself." No, once more, for the reality sought is not present by the very nature of the search. The conscious experience is, I submit, more complex than Professor Dewey realizes. The individual is, in all probability, a practical realist. He has just come from home and believes that the forest stretches away beyond his ken and then gives place to the fields which lead up to his home. Now an adult has certain organized constructs; one of these is the impersonal physical world. I would refer in this connection to James's doctrine of the many worlds.[2] These constructs always have gaps in them when a problem arises concerning them. The man's construct of the physical world is of this kind. He may know the plan of the next village or the direction of New York from Albany, but, just now, he wants to know the way home. Consequently he disregards his other geographical knowledge, because it isn't relevant. It is to fill this particular gap that the idea arises. Until it drops into place, so to

[2] 'Principles of Psychology,' Vol. II., p. 291.

speak, it is psychical, personal, *his* idea. If it is admitted to be true, it flows over and, behold! we have our construct with the 'aching void' filled; the problem has disappeared. My terms must remind the reader of James's description of remembering a name, and it is built upon analogy with that. What, then, is the agreement? It would be paradoxical to say 'agreement with this gap,' and yet, in a sense, that is the fact. If it were not for this functional relation of idea as psychical and the physical, impersonal world, postulated but not completely known, the idea would not, when its truth is recognized, fill the gap, in the physical construct, just where it does. This is the movement in what I would call the organization and building up of the physical world. We say the idea *is* true. Why? Because it agrees with the now constructed physical world. We can look at the *same reality as physical and as psychical.* But, natural realists that we are, we believe that the world was that way all the time. We say the idea *was* true. This is where an unconscious duplicity or straddling enters, which I believe accounts for a good deal of the trouble with 'correspondence.' 'Agreement' represents an endeavor to harmonize structure and function, the past and the present. Now this is a perhaps unduly technical way of asserting that we seek to *disregard the fact of reconstruction and growth because we are dealing with a construct that we look upon as non-temporal and impersonal and common.* I do not think this dialectic movement in the erection of an impersonal and *common* world is adequately recognized in discussions of truth. Extreme pragmatists emphasize too strenuously the fact of function, of reconstruction, of change, the personal side. Extreme intellectualists see only the formal, the structural, the timeless, and thus *may* fall into the copy view. As in most controversies, a middle position is more likely to be right. 'Agreement' involves an unconscious attempt by our thought at a reconciliation. Common sense believes 'it was that way all the time if we had only known it.' A warning may prevent misinterpretation. This is a logical question, primarily, and logic has nothing to do, directly, with realism and idealism as metaphysical systems.

Early in this article I criticized Professor Dewey for a confusion of idea and purpose, asserting that the term 'plan of action,' so much used to-day, is ambiguous. An illustration occurs to me that may bring out my position better. Suppose I am standing at one side of a house with a friend, a house we are both acquainted with, and the question arises about the structure of another part of the house, not visible from where we stand. Both of us have ideas which until they are proved by actual observation we regard as

personal, while the house is common and impersonal. Later we may have the purpose of going around to see which of us is right, but that is not the idea, nor does the idea guide us. Our 'plan of action' will be to walk around. Before we seek to verify our ideas, what do we believe? If I am not mistaken, that the house there is of a certain form and the invisible portion 'hangs on' the part seen by us. The question before each is, Have I filled it out properly?

Perchance, a side-light can be thrown on this problem by a contrast. Some ideas are plans of action, literally, and yet not concerned with truth. I have a problem at present. It is this, Shall I go to the library or down town? It is surely a reflective situation, and I can think of myself as doing either, but I do not raise the truth question. Why? After I go down town I do not say, I was right. Why, again? Because I am dealing here *with another sort of reality*. Ordinarily people do not regard themselves as determined, as the house is. The very nature of this sort of reality is to be changing, active. It strikes me that genetic analysis of the various constructs we make, would go a long way towards solving logical problems.

R. W. SELLARS.

UNIVERSITY OF MICHIGAN.

SOCIETIES

SECTION OF ANTHROPOLOGY AND PSYCHOLOGY OF THE NEW YORK ACADEMY OF SCIENCES

REPORT OF THE SECRETARY

SINCE last reported in these pages, two meetings have been held, in conjunction with the New York Branch of the American Psychological Association.

At the meeting of February 25, held at Columbia University and the American Museum of Natural History, Mr. S. Froeberg gave the results of an experimental study of 'Reaction Time as Affected by the Intensity, Area and Duration of the Stimulus.' He used chiefly light stimuli, and found the reaction time to decrease as the intensity, area or duration increased; as the magnitude of the stimulus increases in a geometrical series the time of reaction decreases in arithmetical progression. A given ratio of increase of intensity produces about twice as much decrease in reaction time as does the same ratio of increase of area or duration. In case of sound, also, increase of intensity brings decrease of reaction time.

Dr. Harvey Carr reported 'A Case of Incipient Hysterical Trance.' The subject was a young woman who since the age of six

years, following an attack of typhoid fever, had been subject to recurring attacks of partial trance, in which, though no unconsciousness, amnesia or alternation of personality occurred, there was motor paralysis (without rigidity) and the following peculiar visual experience. Objects appeared to move away, while remaining, at first, clear-cut and real; next they either remained in the distance or disappeared in a haze, or sometimes the whole visual field became blank. Her feet, as she lay, seemed far away, and this visual illusion was accompanied by the tactile illusion of being indefinitely long. Auditorily, the experience was one of great quiet. The experience was terrifying, but she was unable to struggle or cry out. The subject presented some further symptoms of hysteria, and a comparison of her case with that of Helène Smith leads to the view that only circumstances making the subject antagonistic to her trances and to occultism prevented her from developing into a trance medium.

Mr. W. C. Ruediger spoke on 'Individual Variations in the Area of Distinct Vision.' He has explored an area near the center of clear vision by the tachistoscopic method, and determined the limits within which the letters 'u' and 'n,' of a certain type, can be distinguished 90 per cent. and also 75 per cent. of the time. There were found to be individual differences in the area of distinct vision, comparable in magnitude to the differences found in most other traits. Slight if any correlation could be detected between the size of the area of distinct vision and the speed of reading or the number of fixation pauses per line of print. The amount read during one fixation pause is, in most persons, much less than the amount covered by the area of distinct vision.

Brother Chrysostom, in discussing 'Space,' noted two sources of confusion in treating it. The first consists in a failure to distinguish between real and ideal space. Real space may be defined as the real extension of a given body considered as contained within the surfaces that bound it. This concept is complex, containing an objective element—a real extension, and a subjective element—a logical relation. Real space, viewed concretely, is neither infinitely divisible nor infinite, as current physical and astronomical discussions illustrate. Confusion also arises from an implied identification of space and place. As real space is primarily real *extension* and therefore *solid contents* as bounded, so place is primarily the *bounding surface* referred to the enclosed or bounded body. The two concepts are complementary, not identical.

Professor Dickinson S. Miller traced the doctrine of 'Imageless Thought' back to Descartes, Spinoza and Schopenhauer. The argument for it has been that since the work of thought, the conclusion

reached, can not be attributed to sensation or to images of sensation —since, indeed, the work of thought may be accomplished in the absence of imagery—therefore there must be some other agent in thought, and consciousness must contain *something* besides sensation and imagery. To this argument the answer is that there need be nothing there. Nothing capable of doing the work of thought need show in consciousness. Thought as a function must be distinguished from conscious content. As a function, thought is essentially unconscious. It makes no difference how impotent and irrelevant the images in consciousness may appear, if only by good luck their associations are such as to lead to the right conclusion. What those who testify to experience of imageless thought really experience is probably a bodily feeling, which, left unanalyzed, appears as a feeling of satisfaction or of being on the right track, but which, when carefully attended to, is found to be of sensory quality, like all other conscious content.

Dr. C. B. Bliss sought to show 'Possible Relations between the Trinities of Psychology and Theology.' Theologians have usually sought to derive the concept of the Trinity from quite other than psychological sources. Yet the existence of a psychological trinity is certainly a suggestive fact in this connection; it seems possible that the concept of God as threefold has arisen from conceiving the fundamental tendencies of the human mind as indefinitely expanded. Expansion of the intellectual tendency would give God as the world ground; expanding the emotional tendency would give God as universal love; and expanding the active tendency would give God as universal action.

Professor Keyser, under the title 'Some Relations of Geometry to Philosophy and Psychology,' discussed certain questions connected with the bases of geometry. In Hilbert's 'Foundations of Geometry' culminate the efforts of western thinkers from pre-Euclidean times so to analyze the space intuition as to provide a simple and complete set of independent axioms for the science of space, in particular for what is now distinguished as Euclidean geometry. For Hilbert as for Euclid, the elements of space fall into three classes or systems, points, planes, lines. Hilbert's axioms are statements of certain relations that shall be the fundamental relations satisfied by the elements, but—and this is very important—the elements are not further defined. Accordingly, if one asks, What are points, planes and lines? the answer is, They are any three systems of entities that satisfy the axioms and require no others. Are there other entity systems than those of points, planes and lines, that satisfy the Hilbert axioms? There are infinitely many such other triplets of systems of entities.

One of the most obvious of such triplets consists of the system of points of space except a single specified point, say P, the system of all the spheres containing P regarded as bereft of P and so called pseudo-spheres, and the system of all the circles containing P regarded as bereft of P and so called pseudo or pathological circles. These three systems perfectly satisfy the Hilbert axioms, and the description of the 'space' composed of these systems of entities regarded as elements is *logically* identical with Euclidean geometry, though *psychologically* the geometries are as different as fire and water or as red and bitter. Euclidean geometry is, therefore, one; psychologically many—infinitely many.

On April 22 a meeting was held in the psychological laboratory of Yale University, by invitation of the Yale Psychological Club.

Professor R. S. Woodworth explained 'A Method for Measuring Differences of Order, and its Use in Studying Correlation.' The method differs from the Spearman method of counting up differences of rank in that only the *relative* positions of the terms are considered. The unit of change in order is the transposition of two terms, and the difference between two orders of the same terms is measured by the number of transpositions necessary to pass from one order to the other. This number is easily counted up, and the necessary constants, *e. g.*, the total number of transpositions necessary to *reverse* a given order, are also readily calculated. The method has the same advantages in psychological work as are brought out by Spearman in favor of his method of measuring changes in rank; the present method is claimed by its author to be more accurate and adequate for the purpose in hand.

Mr. F. N. Freeman gave a preliminary report of his 'Studies in Writing Reactions.' The reactor traced lines with an ordinary pencil on a fixed sheet of paper, as in writing, and the tracing was taken on the moving kymograph strip beneath through a typewriter ribbon. The pressure changes which accompanied the movement could also be recorded. The three general types of reaction which occur in writing, consisting, respectively, in starting a movement, stopping a movement, and changing the direction of a movement, were compared as to their reaction time and as to the relative speed, amplitude and pressure of the movements themselves. The reaction time in stopping a movement was, on the average, over 40 per cent. slower than in starting a movement. This may be accounted for on the ground that preparation for starting a movement can be accurately made. On the other hand, no such preparation can be made in stopping a rhythmic movement, such as is used in writing, since the character

of the inhibition depends on the stage of the movement which happens to be in progress at the time of the signal. In starting a movement the reaction time varied with the complexity of the course of the movement after the reaction, which seemed to be reflected back into the preparatory state. Changing the direction was the slowest of all. Consciousness in general was correlated with the whole progressively developing coordination rather than with its separate elements.

Dr. F. Lyman Wells discussed 'The Validity of Individual Judgment as Measured by its Departure from an Average.' When a number of representatives of a given class or group independently pass judgment on, say, the relative merits of different authors, the average judgment is important in that it shows how the authors have impressed this class or group, and the deviation of an individual's judgment from the average measures the closeness of his conformity to the group standard. It remains possible that an individual may judge by a better standard than that of the group, and in fact persons who from their experience and ability would be expected to be the best judges of literary merit are sometimes found to differ greatly from the average. The standard of judgment actually employed by a group may differ widely from the standard which the group would themselves consciously assign as the best: such a difference was found by experiment to obtain in the case of judgments of literary merit.

Mr. W. C. Ruediger spoke on 'The Period of Mental Reconstruction.' A carefully conducted questionary, adapted to statistical treatment, showed great individual differences in the suddenness and vividness of the transition from early beliefs and intellectual attitudes to those of mature life. A large share of the individuals questioned are unable to point to any period of transition, while others report a perfectly defined intellectual 'conversion.' The period of this change is on the average later than that of religious conversion.

Professor Edward L. Thorndike reported some 'Experiments in Memory for Paired Associations.' Twenty-five adults practised from 12 to 40 hours in learning the English equivalents of German words previously unknown to them. This practise did not appreciably increase the number of pairs learned per hour; the result for paired associations differs in this respect from that obtained by James and others in memorizing poetry and by Ebert and Meumann in memorizing nonsense syllables. Also the rapid loss of memory found by Ebbinghaus in case of nonsense syllables did not appear; the loss within a month was very slight. The correlation between the power to remember for a minute and the power to remember for hours

and days is surely positive and probably very high. Individual differences in memory, in this test, are of approximately the same magnitude as in efficiency of observation, controlled association and selective thinking, and greater than in reaction time and sense discrimination.

Mr. H. N. Loomis reported his work on 'Reactions to Weights of Unequal Size.' The movements of the lifted weights, being graphically recorded, showed that, on first approaching the experiment, a person lifted the bulkier weight with the greater force; after repeated lifting this inequality decreased.

Professor James McKeen Cattell read a paper on 'Perceptions, Images and Illusions,' in which he emphasized, as important among the points of difference between a sensation and an image, the weaker tendency of the image to issue in motor reaction, and advanced a number of facts going to show that this relative lack of motor tendency was valuable in enabling us to distinguish images from sensations.

Professor W. P. Montague classified and criticized the various conceptions of truth as introductory to a view of 'Truth as Compossibility.'

R. S. WOODWORTH,
Secretary.

REVIEWS AND ABSTRACTS OF LITERATURE

The Persistent Problems of Philosophy. An Introduction to Metaphysics through the Study of Modern Systems. MARY WHITON CALKINS. New York: The Macmillan Co. 1907. Pp. xxii + 575.

The scope and purport of this interesting book can not be better stated than in the words of the writer: "I have . . . attempted to combine . . . what seem to me the essential features of a systematic introduction to metaphysics with those of a history of modern philosophy. . . . I hope . . . that certain features of the book may prove useful; in particular, the plan on which it classifies metaphysical systems, the summaries it offers as well of the arguments as of the conclusions of modern philosophers, the exact quotations and multiplied text references of its expositions. . . . In the main, this [the bibliographical and critical material] has been relegated, with the biographies, to the appendix of the book, that the continuity of metaphysical discussion may not be broken." So much from the preface; and then, as indicating the results attained, the noble statement with which the principal argument concludes: "We have ended one stage of our philosophic journey, for we have gained a vision of the truth as the monistic personalist sees it: the vision of a One which includes, without annihilating, the many, of an absolute self

who guarantees the individuality of the particular selves, of an eternity which transcends yet does not negate time, and of an immortality required by the deathless ideals of every moral self" (p. 455).

The type of thought is therefore evident. Miss Calkins's work is an introduction to metaphysics based on historical interpretation and leading to a systematic self-idealism. It is not an introduction to philosophy at large, for metaphysics, and metaphysics in the ultimate sense, forms its central theme, epistemology as well as the remaining philosophical disciplines receiving only incidental treatment. It is not 'introduction' in the sense of philosophical or even of metaphysical encyclopedia, but in the sense of outlines, a reasoned system being accepted with conviction and advocated with critical ability. It is based upon an extended expository study of leading philosophers from Descartes to Hegel, since, in spite of the recognized difficulties of such analysis, it is held that 'the historical sequence of philosophies from Descartes's to Hegel's, seems to coincide, roughly, with a logical order' (p. vii). In opposition to the phenomenalistic and agnostic tendencies of the day, the writer is convinced of the possibility of metaphysical inquiry and the value of its outcome. Among its problems three are considered of the utmost importance: first, the conception of reality as one or many, 'numerical monism or pluralism,' as the contrasting systems are happily termed; second, the interpretation of reality as the same as or as unlike consciousness, idealism *versus* 'non-idealism'; third, the interpretation of idealism in terms of selfhood, 'spiritualistic or personal idealism' (pp. 9–10).

This analysis of doctrine implies the classification of systems. Metaphysical systems are both numerically and qualitatively pluralistic (Descartes, Locke), or numerically pluralistic and qualitatively monistic (Hobbes, Leibniz, Berkeley, Hume); again, they are numerically monistic and qualitatively pluralistic (Spinoza), or both numerically and qualitatively monistic (Schopenhauer, Hegel); finally, of the qualitative monists Hobbes is non-idealistic, Hume is a phenomenalistic idealist, Leibniz, Berkeley, Schopenhauer and Hegel are spiritualistic idealists. In general, this classification has unquestionable value, especially as it calls attention to the distinction, which is sometimes neglected, between qualitative and quantitative, or, as the writer better phrases it, numerical, monism. A question suggests itself, however, concerning the adequacy of the analysis. Does it fairly cover all 'the representative modern philosophers (through Hegel)' or even their strictly metaphysical conclusions? Professor Calkins explains the absence of Kant, Fichte and Schelling from her table 'on the ground that their systems, as internally inconsistent, fail to represent any one type of philosophy' (p. 10). But is not this tantamount to saying that the types of philosophy are too many and complex to be arranged according to any one principle of division? To the reviewer the conclusion seems evident, with regard either to metaphysical systems considered as such or to philosophical systems at large.

The historical and critical portions of the volume are written with a facile pen. Few recent treatises on philosophy have combined so constant reference to the sources with so readable an expository style. The writer exhibits, moreover, a comprehensive acquaintance with the history of modern thinking, at the same time that she exercises independent historical judgment. Suggestive, for example, is the classification of Spinoza as a qualitative pluralist because of his doctrine of the attributes (Chap. VIII., pp. 277, 288–293, 294–297), an interpretation which will be found of interest even by those who shall continue to adhere to the traditional view of the completeness of the Spinozistic monism. Less acceptable will prove the omission of Locke's work, considered as a repetition or restatement of the Cartesian dualism (pp. 111, 493); the failure to take adequate account of Berkeley's nominalism in Chapter V.; the depreciatory estimates of Kant (pp. 197–8, 272–3), etc., while as an example of minor corrigenda the restriction of Rousseau's principal works to the two 'Discourses' may be cited (p. 506). But the broader questions of interpretation lead into questions of doctrine as well. At this point unstinted commendation must be given to the spirit of Miss Calkins's work. Never has there been a fairer attempt to solve the difficult problem of evolving doctrine from historical analysis. Often the reader is warned in terms that the exposition of a given philosopher follows an order different from his own, or emphasizes positions which he himself did not consider of preeminent importance, or, as notably in regard to the 'phenomenalistic idealism' of Hume (Chap. VI.), includes principles which are logically implied in his own conclusions rather than advanced by him and definitely defended. Scientific conscientiousness is here complete, with in most instances results commensurate with the sincerity of the endeavor. Nevertheless, it is clear that in the end issues remain which may well be regarded in the future, as they have often been considered in the past, from points of view other than those which are adopted in the work before us. Many of these concern the central principles, idealism and selfhood. Thus in Chapter VI., which has just been mentioned, skeptical idealism is so firmly held inherent in Hume's system while, on the other hand, the existence of objects, even of finite selves and God, is evidently assumed in the course of his argument, that the hypothesis of bad faith is suggested as a solution of the contradiction (pp. 177–8, 191). Hegel supplies an example of the second problem; for in spite of such careful reasoning as that which is given in Chapter X. (especially pp. 382–389), it is possible still to question the analysis of the Hegelian absolute in terms of personal consciousness.

Concerning the systematic conclusions of the writer, judgment will also differ with the schools. It is at once refreshing and encouraging to find the self coming to its own again, after the dreary waste of philosophies, as well as psychologies 'without a soul.' And the fact gains in significance, when it is realized that it is psychologists of rank who are

anew emphasizing selfhood.[1] But will it not be necessary to give the doctrine the deepest possible grounding? And will it be possible to maintain the principle on the basis alone of immediate self-consciousness and the criticism of opposing positions (pp. 406–410 *et passim*)? Larger attempt is made to define the meaning of self and to meet the questions arising from the relations of the absolute self to the partial selves. In the final chapter this subject is developed in connection with contemporary discussions. Much in the spirit of Royce, the writer contends for the uniqueness and the inclusiveness of the absolute self in contrast to the 'pluralisms' of Howison, Rashdall and McTaggart. The problems which are involved in monism of this type are resolutely faced, and although it is not claimed that they are all elucidated, none are passed without careful consideration. In this way the argument advances from the existence of self, its nature and its relation to time, to the problem of freedom and the outlook toward immortality, concluding with the eloquent summary which has already been quoted.

A. C. ARMSTRONG.
WESLEYAN UNIVERSITY.

Ethical Aspects of Economics. W. R. SORLEY. *International Journal of Ethics,* Vol. XVII., Nos. 1 and 3. Pp. 1–13; 275–290.

In the days of Mill and Carlyle there was a bitter controversy between economists and moralists, which arose from the failure, or, at least, the seeming failure, of the economist to recognize the continuity of the economic life with its social environment. To-day a problem fronts both economist and moralist, which arises from the full recognition by the economist, as well as by the moralist, of that continuity which before was in question. The ethical aspects of economics are two: the first is the fact of that continuity just mentioned; the second is the problem that arises in and from that continuity.

Dealing with the first of these ethical aspects of economics, Mr. Sorley classifies the moral influences which enter into and modify the production and distribution and consumption of wealth under three heads: mental processes, the forms of social life, and the system of law declared and enforced by the state. In the first of these fields, for example, it is impossible to suppose man actuated merely by the desire for wealth even in the pursuit of wealth. On the contrary, that pursuit is largely actuated by motives that are ethical, by the sense of duty, and by ideas of good and evil. Economic facts are imbedded in a larger mass of facts, mental, social and legal, among all of which the ethical facts have an important place. The economic man or the economic state is a mere figment or hypothesis.

The second and more important ethical aspect of economics may be resolved into the relation which exists between the concept of value in exchange, or extrinsic worth, on the one hand, and worth proper, or intrinsic worth, on the other. The term *value,* as the economist uses it,

[1] *Cf.* with Miss Calkins's argument in this work and in her more distinctively psychological treatises, Chap. XII. in Judd's 'Psychology,' recently published.

is always value in exchange, and is commonly stated in terms of money. But money itself is a value in exchange. Therefore, in attempting to state the value in exchange of any commodity in terms of money, we are landed in a *circulus in definiendo*. Either this fact is overlooked by the economist or he hopes to escape by employing such terms as *value in use* or *utility*. It is, however, necessary to recognize that the only escape from the circle of values in exchange, or extrinsic worths, is found in reference to an intrinsic worth, which is entirely independent of exchange. And we must also note that the intrinsic worth of things can not be determined by the economic method. Many things that have great intrinsic worth, a good conscience, for example, have no extrinsic worth, no economic worth at all.

This distinction between extrinsic and intrinsic worth enforces the essential dependence of economics on that science which deals with intrinsic worth, the science of ethics. And Mr. Sorley proceeds to define the purpose and methods of ethics, considered from this point of view.

The leading conception of ethics is that of intrinsic worth, or goodness. It raises the question what a thing is really worth, not merely what it has, as a matter of fact, been worth to this man or that. This real worth is a matter, not of fact, but of ideal. However serviceable the historical study of the social facts of morality may be, that study must be looked on as subsidiary to the determination of the validity of standards of worth. That validity, which is the primary concern of ethics, can not be determined either by the permanence of those standards—the conservative fallacy, or by the tendency of those standards—the radical fallacy. It is not to be assumed that that which has most worth either has existed or ever will exist.

These considerations naturally lead the economist to ask on what basis ethical science does base its conclusions, by what method it actually determines the real worth of things. There are, says Mr. Sorley, two ways. Ethics is one of those sciences that look on life as a whole; it takes into consideration all worths whatever. And it aims to establish a system of moral judgments which shall cover the whole of life and be free from internal contradictions. The first method, then, rests its conclusion on the *scope* and the *coherence* of the system of judgments.

The second method is the appeal to the moral judgment of the good man. "The opinion of the good man on a question of conduct appeals to the average man with a conviction and intimacy which the opinion of the clever man on a question of science does not produce."

PERCY HUGHES.

TULANE UNIVERSITY.

Les expressions extérieures et profondes des émotions chez l'homme et les animaux. FRANÇOIS-FRANCK. *Bulletin de l'Institut Général Psychologique.* April–June, 1906. Pp. 83–94.

M. Franck gives an interesting account of emotion as derived from secondary and representative stimulation. His presentation is good in

itself, though his contention that the James theory is incorrect seems hardly to hold. We are referred to figures in the course of the discussion, but as they are not printed in the text we must imagine them as he refers to and explains them verbally. M. Franck supports a theory somewhat different from the celebrated James exposition and speaks of 'cerebral surprise' and 'psychic shocks,' which result, on the one hand, in external expression and, on the other hand, in deep organic changes (p. 84). He refers to curves tracing such organic changes and to photographs taken simultaneously with such tracings and showing the external emotional expression. Such charts must be of great interest, and should have been published in the text. On the side of external expression we find typical emotions represented by certain facial types. On the side of organic changes we have those in the respiratory and in the circulatory systems. In respiration, during an emotion, we have an action of contraction, of bronchial spasm, which tends to stop air from entering the lungs. This occurs at times in public speaking when the speaker seems unable to proceed. In the action of the heart we may have a phase of acceleration or one of arrest.

It is upon such deep organic changes, due to cerebral excitation, that the emotion depends. The brain is the point of departure of the whole (p. 93). No emotion, so says M. Franck, can arise from any circulatory or other changes which do not come from cerebral excitation. M. Franck's presentation seems to have been well received, as at the end we have the note 'prolonged applause.' I think, however, that the James theory will still hold good. The question at issue is that which is concerned with what is felt during an emotion, rather than with what causes the bodily disturbance. Whatever occurs, whether it be of peripheral or central origin, if this be felt as emotion, it will fit in full the facts as set forth in the James theory. I might add that it is just these very organic changes upon which James lays so much stress. He does not, as M. Franck seems to suggest, consider only surface excitations.

FELIX ARNOLD.

NEW YORK CITY.

JOURNALS AND NEW BOOKS

MIND. January, 1907. *The Time Quality* (pp. 1–26): HENRY RUTGERS MARSHALL. – The appreciation of time is due to the existence of a three-phased quality of all presentations. The past is characterized by the simplification of complexity, the future by the development of complexity and the present by lack of marked development, or simplification. Presentations are 'psychic emphases' and may be referred to past, present or future. The whole presentation of any moment is a complex of multiple emphases and so a highly complex system of psychic systems. *A Criticism of the Psychologist's Treatment of Knowledge* (pp. 27–53): H. A. PRICHARD. – Psychologists get a false start from Locke and Berkeley. They treat 'knowing' as a special kind of object instead of as that which

is opposed to an object as the apprehension of it. They state the subject side of a subject-object relation as if it were the object side. Mental facts can not be explained genetically, for mental processes are ultimate like space, time and colors. It is understanding, and not explanation, which is required, and so Plato and Aristotle give the best psychology. *The Structure of Reality* (pp. 54–69): GERALD CATOR. – Reality is a graded logical system. The absolute exists and knows, and the not-absolute is also real, but while the absolute exists necessarily, the not-absolute does not exist necessarily, but is caused to exist by the will of God, the absolute. *Image, Idea and Meaning* (pp. 70–100): R. F. ALFRED HOERNLÉ. – The author complains of current confusions of these terms. 'Sign' and 'meaning' are inseparable for both logic and psychology. The distinction between them is not equivalent to that between 'idea' and 'reality.' And the distinction between 'idea' and 'reality' is not the distinction between mental facts which have meaning and mental facts which have no meaning. It is also false that what we apprehend ideally can not, as such, be real. The word 'idea' has a double usage, to describe (1) a qualitative difference in the content of experience and (2) a qualitative difference in the mode of experiencing a content. These distinctions are applied to facts of volition. *The Conception of the Unknown in English Philosophy* (pp. 101–117): T. M. FORSYTH. – The development of this concept in connection with the concept of experience shows us that the known always implies the unknown, and the two regions are continuous. *Critical Notices* (pp. 118–137): John I. Beare, *Greek Theories of Elementary Cognition from Alcmæon to Aristotle:* G. R. T. Ross. George Santayana, *The Life of Reason: or the Phases of Human Progress:* H. BARKER. George Trumbull Ladd, *The Philosophy of Religion:* G. GALLOWAY. *New Books* (pp. 137–152). Thomas Marshall, *Aristotle's Theory of Conduct:* JOHN SIME. *Studies in Philosophy and Psychology, by Former Students of Charles Edward Garman:* R. F. ALFRED HOERNLÉ. John Denham Parsons, *The Nature and Purpose of the Universe:* DAVID MORRISON. George Galloway, *Studies in the Philosophy of Religion:* ALLAN MENZIES. Joseph Rickaby, *Free Will and Four English Philosophers (Hobbes, Locke, Hume and Mill):* G. GALLOWAY. Norman Alliston, *Reconnoitres in Reason and the Table Book:* D. M. Thomas D. Savill, *Clinical Lectures on Neurasthenia:* W. L. M. A. Marie, *La Démence:* W. LESLIE MACKENZIE. Charles Blondel, *Les Auto-mutilateurs: étude psychopathologique et médico-légale:* W. L. M. Von Hans Dreyer, *Personalismus und Realismus;* P. H. Ritter, *Schets eener critische Geschiedenis van het Substantiebegrip in de nieuwere Wijsbegeerte:* J. P. K. *Philosophical Periodicals. Notes.*

Forel, August. *Hygiene of Nerves and Mind in Health and Disease.* Authorized translation from the second German edition by Herbert Austin Aikins. New York and London: G. P. Putnam's Sons. 1907. Pp. x + 343.

Häcker, V. and W. *Naturwissenschaft und Theologie.* Tübingen: Mohr. 1907. Pp. 41. .80 M.

Kurnatowski, Georges. *Esquisse d'évolution solidariste.* Paris: Marcel Rivière. 1907. Pp. 95.

Lewandowsky, M. *Die Funktionen des Zentralen Nervensystems.* Ein Lehrbuch, mit 1 Tafel und 81 Abbildungen im Text. Jena: Gustav Fischer. 1907. Pp. 420.

Vogel, Sebastian. *Die Physik Roger Bacos.* Erlangein: K. b. Hof—und Universitätsbuchdruckerei von Junge und Sohn. 1906. Pp. xi + 106.

Yale Psychological Studies. Monograph Supplements to the *Psychological Review,* New Series, Vol. I., No. 2. Edited by Charles H. Judd. June, 1907. Pp. 227–423.

NOTES AND NEWS

THE following summary of the paper on 'Philosophical Education,' read on June 3 by Mr. Benjamin Dumville before the Aristotelian Society, is from the *Athenæum* for June 15: "In education, practise can not always wait for theory. Often, therefore, the 'practical' man despises theory. Tradition and expediency become the arbiters. But pure theory must base itself upon firm foundations. We must demand the *why* of both tradition and expediency; in other words, we must appeal to philosophy. The nature of one's ultimates, however, has far-reaching effects on educational theory. Spencer's order of importance of knowledges is very different from Aristotle's. In face of such contradictions many writers on educational theory fly back to the empirical sphere; but their 'principles' lack consistency, and lead to contradictions. In morals, for instance, we are told both to educate to the standard of the moral order around us, and also to set before us the highest ideal. The former recommendation makes room for worldly 'tact'; the latter indicates that 'truth is the outcome of all thought and good of all action.' Plato, in his 'Republic,' has given us an example of an educational system founded on a philosophy. He accepted the higher ideal; but he could ignore the practical side of life. We can no longer do so. If, then, we are to remain philosophers in education, we must elaborate a system of philosophy which takes into serious account all phases of life. This has been attempted by Dr. Rashdall in his 'Commensurability of all Values' (*Mind,* April, 1902). But most modern systems of education are framed in the dark, lacking philosophical guidance. The 'humanists' (*e. g.,* Sturm) largely follow tradition. This leads to stagnation—mere reverence of the past. The 'realists' (*e. g.,* Comenius and Spencer) take account of modern activities, but lack any true philosophical ground. The 'naturalists' (*e. g.,* Rousseau) carry 'development' to an extreme. Education, however, is not mere development; it is *training,* and training implies an end which the educator has in view. A new school has arisen—called

by Mr. O. Browning the Scientific or Metaphysical School. Herbart is its chief representative. He founds his education on a philosophy which he elaborates. This philosophy exhibits certain weaknesses which are naturally reflected in his pedagogy. The derivative nature of will in his psychology is paralleled in his pedagogy by inordinate sacrifices to the doctrine of interest. The vagueness of his ethics corresponds to the uncertainty which many educators feel with regard to the efficacy of a many-sided interest in securing morality. Enough has been said to show the deep connection which exists between philosophy and educational theory. Although compromise will always be necessary in practise, we ought not on that account to give up serious reflection on theory. The diversity of the inquiring is to be preferred to the unanimity of the ignorant. We can not, perhaps, hope with Plato for a race of philosopher-kings, but we are not expecting more than is reasonable in looking forward to a generation of philosophical directors of education."

THE checking of statistics by taking account of the personal equation has not hitherto been attempted, but Mr. Yule, writing in the *Journal of the Anthropological Institute,* expresses the belief that the personal equation is apt to mar seriously the results of statistical reports in matters of ill-defined qualities. He distributed among thirty-four unusually intelligent observers a number of cards of sixteen different shades of color, each card having two tints. The subjects were requested to record the colors, distinguishing, first, light from dark; secondly, light, medium and dark; and then making five discriminations. The observers were found often to contradict themselves, and more often to contradict one another. Mr. Yule is of the opinion that in matters where discrimination and identification are more difficult, such, for example, as in mental and moral qualities, greater inconsistencies will result. It resulted to a small degree—not quite 2 per cent.—from the presence of two shades on one card that observers placed both in one class instead of in different classes.

THE General Board of Studies of Cambridge University recommends that the present lectureship in physiological and experimental psychology be not continued, but that in its place two lectureships be established, one in the physiology of the senses in connection with the special board for biology and geology, and that the annual stipend of the lecturer be £100; the other in experimental psychology in connection with the special board for moral science, and that the annual stipend of the lecturer be £50.

THE following changes have been made in the department of psychology in the University of Illinois: Dr. Stephen S. Colvin, associate professor, has been advanced to a professorship and Dr. John W. Baird, instructor, to an assistant professorship; Dr. Fred Kuhlmann, assistant in psychology at Clark University, has been appointed instructor. The department has been assigned new and enlarged quarters in the addition to the Natural History building, which will be ready for occupancy in September, 1908.

PROFESSOR WILLIAM JAMES has been elected a corresponding member of the British Academy.